

WHAT IS CLAIMED IS:

1. A photovoltaic module subassembly comprising:
a plurality of photovoltaic cells arranged in an array and electrically interconnected;

5 a translucent, first plate member of resin adjacent to a light receiving surface of said plurality of photovoltaic cells;

a second plate member of resin adjacent to a non-light receiving surface of said plurality of photovoltaic cells; and

a translucent filler layer located between said first and second plate members of resin to seal said plurality of photovoltaic cells.

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2. The subassembly of claim 1, wherein said first plate member of resin is a film containing fluoro-resin as a source material.

3. The subassembly of claim 1, wherein said first plate member of resin is a stack of a film containing fluoro-resin as a source material and a film containing polyethylene terephthalate as a source material.

4. The subassembly of claim 1, wherein said second plate member of resin is translucent.

5. The subassembly of claim 4, wherein at least one of said first and second plate members of resin is colored and transparent.

6. The subassembly of claim 4, wherein at least one of said first and second plate members of resin contains an ultraviolet absorber.

7. The subassembly of claim 1, wherein said filler layer contains as a source material a resin selected from the group consisting of ethylene-vinyl acetate (EVA) resin, polyvinyl butyral (PVB) resin, and silicon resin.

8. The subassembly of claim 1, wherein said plurality of photovoltaic cells is sealed in said filler layer as said cells undergo a lamination process employing a pouching lamination apparatus.

9. The subassembly of claim 1, wherein said plurality of photovoltaic cells each have a light receiving surface unbonded to said filler layer.

10. The subassembly of claim 1, wherein a conductive wire electrically connecting said plurality of photovoltaic cells and also allowing an external, electrical output is provided in said filler layer and said filler layer has an end provided with an output terminal electrically connected to said conductive wire.

11. A photovoltaic module with sealed insulating glass comprising:
a first plate of glass;
a second plate of glass arranged opposite said first plate of glass;
a spacer member forming a space between said first and second plates of glass; and
a photovoltaic module subassembly arranged in the space formed by said spacer member, said subassembly including
a plurality of photovoltaic cells arranged in an array and electrically interconnected,
a translucent, first plate member of resin adjacent to a light receiving surface of said plurality of photovoltaic cells,
a second plate member of resin adjacent to a non-light receiving surface of said plurality of photovoltaic cells, and
a translucent filler layer located between said first and second plate members of resin to seal said plurality of photovoltaic cells.

12. The module of claim 11, wherein said subassembly is arranged to cooperate with at least one of said first and second plates of glass to form an air layer between said subassembly and said at least one of said first

and second plates of glass.

5 13. The module of claim 11, wherein said spacer member has butyl rubber attached thereto and said spacer member is fitted between said first and second plates of glass at their respective ends to pose said butyl rubber between said spacer member and said first and second plates of glass and silicon resin is applied and allowed to set outer than said spacer member between said first and second plates' respective ends to allow said space to be watertight.

14. The module of claim 11, wherein said subassembly is detachably attached to a frame formed of said first and second plates of glass and said spacer member.

15. The module of claim 14, wherein said spacer member is provided with a guide rail slidably holding said subassembly to detachably attach said subassembly to said frame.

16. The module of claim 11, wherein said first and second plates of glass are of different types or a single type selected from the group consisting of sheet glass, white glass (low-iron glass), figured glass, tempered glass, heat-strengthened glass and wired glass.